

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;  
William L. Massey, Linda Breathitt,  
and Nora Mead Brownell.

ISO New England, Inc.

Docket No. ER02-1149-000

ISO New England, Inc.

Docket No. ER02-1149-001

ORDER ACCEPTING AMENDMENTS

(Issued April 26, 2002)

In this order, the Commission accepts amendments to market rules filed by ISO New England, Inc. (ISO-NE). This order benefits New England customers because the proposed amendments will improve the pricing efficiency of the New England markets for the summer of 2002.

Background

On February 27, 2002, ISO-NE filed with the Commission a package of changes to the New England Power Pool's (NEPOOL) market rules. ISO-NE states that this package implements several reforms in the New England energy and reserves markets which are intended to improve pricing in the energy market and increase opportunities for trading between New England and New York. ISO-NE seeks an effective date of May 1, 2002 for the package, so that it is in effect for the summer season. ISO-NE states that these reforms are an interim measure until the implementation of Standard Market Design (SMD) in New England, which is expected to be between the first and second quarter of 2003.

As background to these changes, ISO-NE states that, during the summer of 2001, on some of its highest-load days, it found a disconnect between the Energy Clearing Price (ECP)<sup>1</sup> and the level of load. While supply conditions were becoming worse, the ECP nevertheless stayed relatively low. ISO-NE also found that the ECP changed dramatically

---

<sup>1</sup>The ECP for each hour is the time-weighted average of the real-time marginal price (RTMP) for each eligible resource that provides energy to ISO-NE. Resources which can be dispatched, turned off, or ramped up or down within five minutes of a dispatch instruction are eligible to set the RTMP. A new RTMP is calculated every five minutes during the hour, and the RTMPs for each resource are then averaged to arrive at the ECP for all of ISO-NE.

from one hour to the next, as external contracts (*i.e.*, contracts for energy from outside of the New England control area) were dispatched to relieve shortages.

ISO-NE has concluded, based in part on a November 2001 report by its independent market advisor, Dr. David Patton (the Patton Report) that the ECP was often set at inefficiently low levels, particularly during times of high demand, due primarily to the large amount of capacity operating out-of-merit and ineligible to set the ECP. The Patton Report recommended that all units that are committed intra-day and dispatched at their Low Operating Limit (LOL) in reserve shortage situations, and peaking units that are dispatched for reasons other than congestion relief, should be eligible to set the ECP when providing incremental energy<sup>2</sup> to the system. It further urged greater use of non-flexible resources to set the ECP.<sup>3</sup>

ISO-NE also proposes changes to the reserve markets which will complement its proposed energy market changes.<sup>4</sup> According to ISO-NE, one possible reason for the relatively high LOLs bid by New England generators may be the current pricing of Operating Reserves.<sup>5</sup> ISO-NE therefore seeks to compensate the opportunity costs incurred by reserve suppliers, and to create a new product, Replacement Reserves, which will be selected on a day-ahead basis.

---

<sup>2</sup>Incremental energy is energy provided by a unit which either is providing energy for an in-merit bid, or is providing additional reserves by allowing another unit to generate.

<sup>3</sup>In an ideal energy market, each unit would be flexible enough to be dispatched up or down at five-minute dispatch intervals, based on whether its energy bid was the most economic as load shifts and bids change, and the ECP would always be the bid of the last MW of energy supplied to the system. The flexibility of most units, however, is limited by minimum start times, minimum run times, ramp rates and LOLs. Energy from these units tends to be higher-priced than energy from more flexible units, and ISO-NE's unit commitment software currently excludes from ECP calculations those units that are not able to respond flexibly.

<sup>4</sup>When there is a shortage of reserves, a unit that relieves the constraint in either the energy or the reserves markets is effectively relieving the constraint in both markets. A unit that is dispatched in these circumstances should, therefore, be eligible to set price in both markets and should also be indifferent as to the market in which it receives compensation.

<sup>5</sup>Operating Reserves refers to Ten-Minute Spinning Reserve (TMSR), Ten-Minute Non-Spinning Reserve (TMNSR) and Thirty-Minute Operating Reserve (TMOR).

A. Overview of Changes

ISO-NE proposes the following changes to its energy markets:

- In certain periods, peaking units and external contracts that, generally speaking, can be committed and decommitted hourly, as well as certain other units in certain circumstances, will be considered in calculating the ECP.
- Generating units will be required to bid a LOL based on the unit's physical and economic characteristics.

ISO-NE proposes the following changes to its reserve markets:

- Opportunity cost payments will be paid to units that provide non-spinning reserves when they are in-merit for energy.<sup>6</sup> Availability bids from those units will be capped at \$2.52/MW so as to protect against gaming.
- ISO-NE will institute reverse cascading of reserve prices, so that thirty-minute reserves are never paid more than ten-minute reserves, and non-spinning reserves are never paid more than spinning reserves.
- ISO-NE will create a new product called Replacement Reserves.

Finally, ISO-NE proposes to permit intra-day transactions between control areas.

B. Energy Market Reforms

1. Allowing peaking units and dispatchable external contracts to set the RTMP.

Currently, only those units with "dispatch flexibility" – the ability to be dispatched in five-minute increments – are eligible to set the RTMP. ISO-NE proposes to make units that have "commitment flexibility" – the ability to be dispatched quickly, although not within five minutes -- eligible to set the RTMP. Two types of units have such commitment flexibility: (1) peaking units and (2) "dispatchable" external contracts, i.e., external contracts that can be scheduled on and off hourly, and must be prescheduled with the originating control area a half-hour in advance. ISO-NE proposes to allow peaking units operating at LOL to be eligible to set the RTMP if they (i) have a minimum run time and down time of one hour or less, (ii) require a startup notification of 30 minutes or less, (iii)

---

<sup>6</sup>ISO-NE measures this opportunity cost as the difference between the resource's energy bid and the ECP, see ISO-NE filing at 31.

are dispatchable via ISO-NE's Remote Intelligence Gateways (RIGS) and (iv) are not operating out-of-merit as a result of congestion. ISO-NE proposes to allow dispatchable external contracts to set the RTMP if they provide 100 MW blocks at a single energy bid price.

ISO-NE proposes to permit both peaking units and dispatchable external contracts to set the RTMP only when they are supplying incremental energy to the system. Both classes of resources would remain eligible for uplift<sup>7</sup> in intervals in which they are not eligible to set the RTMP. ISO-NE maintains that, in making commitment-flexible resources equivalent to dispatch-flexible resources for purposes of developing the ECP, it is making its pricing more efficient with respect to both classes of resources, and providing similar treatment to resources that provide equivalent commitment flexibility to the system.

2. SOSS Units. Specific Output Self-Scheduling (SOSS) units are limited-energy hydroelectric units that specify their desired MW output at all times as self-scheduled values. These units are not eligible to set the ECP. On rare occasions, however, SOSS units can provide energy above these self-scheduled values, within merit and in response to dispatch instructions. ISO-NE proposes that SOSS units, when operating above their self-scheduled values, set a floor for RTMP.

3. Units Flagged for Congestion. Currently, units flagged for congestion and dispatched out of merit are not eligible to set the RTMP. On some occasions, however, such units operate in merit order. ISO-NE proposes that units flagged for congestion should be allowed to set the RTMP when operating in merit order.

4. Requirement to bid physical LOLs. Because units operating at LOL are not eligible to set the ECP, high LOLs may cause distortions in the ECP, so that the ECP does not reflect the true cost of energy. ISO-NE is concerned that New England generators typically bid high LOLs for which there is no technical basis, thus eliminating those units from setting the ECP. ISO-NE proposes to require unit to bid LOLs based on their physical characteristics, although it will provide a means for units to seek adjustment of their LOLs from ISO-NE if necessary for emissions or economic efficiency reasons.

## C. Reserve Market Reforms

---

<sup>7</sup>When ISO-NE must procure energy supplies in circumstances where the market clearing price produces revenues that are less than the suppliers' bids, ISO-NE makes additional " uplift" payments to such suppliers to make up the difference between the market clearing price and the suppliers' bids.

1. Compensation for opportunity costs incurred by units providing reserves. Currently, only units that provide TMSR are paid their estimated opportunity costs for providing reserves rather than energy. ISO-NE proposes to extend the payment of opportunity costs to units providing TMNSR and TMOR. Opportunity costs will be paid based on the difference between a resource's energy bid and the ECP.

2. Reverse price cascading. ISO-NE proposes to provide reverse price cascading of operating reserve prices, so that the TMSR price will always be greater than or equal to the TMNSR price, which will in turn always be greater than or equal to the TMOR price. This ensures that less valuable reserve products are never paid more than more valuable reserve products, and will remove an incentive to providers of high-quality reserves to manipulate bids to avoid being selected for TMSR.

3. Availability bids. ISO-NE proposes to limit availability bids for non-spinning reserves (TMNSR and TMOR) to \$2.52/MW. The \$2.52 figure is based on the bid limitation currently in effect in New York, which was based on the highest market prices in its reserve markets prior to an apparent exercise of market power.

4. New Replacement Reserves product. ISO-NE is required to maintain sufficient operating reserves to enable it to replace the energy loss caused by a loss of any resource or transmission line within ten minutes, and then to replenish its ten-minute reserves within another thirty minutes. ISO-NE proposes to create a new market product called Replacement Reserves, which would be a sub-component of TMOR and would increase the total TMOR requirement.

#### D. Inter-Area Transaction Reforms

To alleviate barriers to trading with regions adjacent to New England, ISO-NE proposes to make changes in the market rules to facilitate Short Notice External Transactions (SNETs), which allow intra-day arbitrage of prices between control areas. An SNET is a contract for energy submitted to ISO-NE after the deadline has passed for the dispatch period in which the transaction will begin, sometimes with as little as ninety minutes' notice prior to the hour in which the transaction is to be scheduled. Currently ISO-NE does not accept SNETs. ISO-NE now proposes to accept SNETs so long as accepting such transactions does not prevent ISO-NE from meeting its Replacement Reserve requirement. Because ISO-NE fears that SNETs could lead to generators gaming the system -- for instance, engaging in physical withholding to raise New England prices by selling out of New England into New York even when prices are higher in New England -- it also seeks to amend Market Rule 17 to monitor SNETs to ensure this does not happen.

#### E. Technical Amendments

ISO-NE states that it is also filing technical rule changes to Market Rules 2, 4, 5, 6, 8 and 9 intended to rectify inconsistencies among market rules and to assure more accurate conformance between the market rules and ISO-NE's software.<sup>8</sup> ISO-NE is also, on behalf of NEPOOL, filing an unrelated change to Market Rule 6 that was approved by the NEPOOL Participants Committee.

F. Other Issues

ISO-NE notes that many of the difficulties which these changes seek to ameliorate will be more effectively addressed when ISO-NE implements SMD. ISO-NE submits, however, that prior to the implementation of SMD, this package represents the best possible solution to the pricing inefficiencies of Summer 2001. ISO-NE states that it worked extensively with the NEPOOL participants to develop the package, but was able to obtain only a 65 percent favorable vote from the NEPOOL Participants Committee, two percent short of the majority required for passage. Because NEPOOL can therefore not make this filing, ISO-NE makes it under Section 6.17 of the Interim ISO Agreement.<sup>9</sup> ISO-NE states that it

has determined in good faith that the failure to immediately implement the proposed Market Rule changes would substantially and adversely affect the competitiveness or efficiency of the NEPOOL Markets and further invoking the rulemaking procedures of the relevant NEPOOL Committee would not allow for timely redress of the ISO's concerns.<sup>10</sup>

ISO-NE asserts that this package will increase pricing efficiency in the current single-price, single-settlement market design, and represents a balancing of the interests of

---

<sup>8</sup>On March 12, 2002, ISO-NE submitted an amendment to this filing in Docket No. ER02-1149-001 seeking to revise Section 8.3 of Market Rule 8 and Section 9.3 of Market Rule 9 to provide that upward ramp-constrained units and SOSS units are excluded from the calculation of the opportunity cost component of the clearing price for non-spinning reserve.

<sup>9</sup>Section 6.17(e) provides that ISO-NE has authority to adopt emergency market rules and emergency modifications to market rules if it determines in good faith that (i) the failure to immediately implement new, or modify existing, system rules or procedures would substantially and adversely impact the competitiveness of the NEPOOL market, and invoking the rulemaking procedures of the relevant NEPOOL Committee would not allow for timely redress of the ISO's concerns.

<sup>10</sup>ISO-NE filing at 3.

the participants. It urges the Commission to accept the entire package, noting that some of these changes favor generators while others favor purchasers, but that all the provisions of the package are interdependent, and approval of some but not all may have undesirable effects.

### Interventions, Protests and Comments

Notice of the filing was published in the Federal Register, 67 Fed. Reg. 10,701 (2002), with comments, protests and interventions due by March 20, 2002.

Motions to intervene were timely filed by Constellation Power Source, Calpine Eastern Corporation, Member Systems, Duke Energy North America, the NEPOOL Participants Committee, Until Power Corp, the New England Conference of Public Utility Commissioners (NECPUC) and Vermont Department of Public Service (VDPS), KeySpan-Ravenswood, the Maine Public Utilities Commission, and Dynegy Power Marketing. Timely motions to intervene and comments were filed by National Grid USA, the New York Independent System Operator (NYISO), the Connecticut Department of Public Utility Control (Connecticut), the New England Consumer Owned Entities, and TransCanada Power Marketing (TransCanada). New England Suppliers filed a motion to intervene, comments and a limited protest. NSTAR Electric and Gas Corporation (NSTAR) filed a motion to intervene and comments out of time. On April 4, 2002, ISO-NE filed an answer to New England Suppliers' protest.

### Discussion

#### A. Procedural Matters

Pursuant to Rule 214(c) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(c) (2001), the timely, unopposed motions to intervene serve to make the movants parties to this proceeding. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2001), the Commission will grant NSTAR's late-filed motion to intervene, given the early stage of the proceeding and the fact that no undue disruption of the proceeding or undue prejudice to existing parties will result and this movant's interest is not adequately represented by other parties in the proceedings. Under Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2001), no answer to a protest may be made unless ordered by the decisional authority. The Commission will reject ISO-NE's answer because it does not provide new material necessary for the Commission to decide this matter.

#### B. Rules Change Package

1. Acceptance of entire package. The proposed changes to the market rules are being sought to help correct the inefficiencies in the markets that have resulted in abnormally low energy clearing prices (ECPs) during peak demand periods during Summer 2001. The Patton Report concludes that the low ECPs during the peak demand period from July 23, 2001 to August 10, 2001, were primarily attributable to the current market rules and procedures, namely, (a) a large amount of capacity being dispatched out-of-merit order or otherwise ineligible to set the ECP; and (b) significant impediments to efficient trading between New York and New England during peak periods when price differences prevail. ISO-NE states that the proposed market rule changes will address these problems during the interim until SMD is implemented.

Many of the issues resulting from these market inefficiencies will only be resolved when ISO-NE implements SMD. Since, however, ISO-NE does not anticipate implementing SMD until after Summer 2002, we view this package as an acceptable interim and partial solution to New England's flawed markets. The proposed changes will make the ECPs and prices for reserves more reflective of market conditions, thus increasing the efficiency of the market by sending improved price signals to customers and generators. The package is intended to make generators indifferent as to whether they are selected to participate in the energy or reserve markets, promote the development of the desired mix of generating resources, and increase trade with other regions.

The NEPOOL Participants Committee approved a binding motion on participants to support the Reform package in its entirety and not piecemeal modifications that could have undesired and unforeseen consequences.

Only TransCanada and NSTAR urge rejection of the package. TransCanada submits that the proposed rules changes fail to address the fundamental flaws in the NEPOOL reserves markets and will divert scarce ISO resources away from SMD implementation, although if the Commission accepts the proposed market rule changes, even in part, TransCanada strongly urges it to adopt the \$2.52 bid cap in the reserves markets. NSTAR states that the proposed Market rule changes do not address the fundamental flaws in the reserve markets and instead simply increase generator revenue in an effort to discourage abusive generator conduct in the energy market, and that the existing reserve markets are fundamentally flawed and incremental attempts to improve these markets is fruitless and diverts resources from focusing on a global solution (i.e., SMD).

The Commission finds that the proposed market rule changes are interdependent such that the proposed changes in the reserve markets are directly tied to the anticipated results in the energy market. A change in any one of the proposed market rule changes will likely not result in the desired benefits, and could delay implementation of the changes beyond May 1, 2002. We therefore find that the market rule changes must be either



accepted or rejected in their entirety, and the Commission will accept them in their entirety. The Commission's review of the proposed market rule changes finds that the changes should provide interim improvements to ISO-NE's flawed markets.

TransCanada's and NSTAR's opposition to the market rule changes on the basis that the changes will not completely repair the flawed markets is misdirected. Improvements that increase market efficiency should be made when the benefits exceed the costs, and that is the case here. Moreover, there should be no or minimal effect on the time frame for implementation of SMD. And even if some minimal delay should take place,<sup>11</sup> at best SMD could not be implemented prior to December 1, 2002, and it is our view that the benefits of having in place a partial fix for New England's flawed markets for the summer of 2002 outweigh the possibility that SMD may be briefly delayed. That said, however, the structural flaws in the markets will only be corrected, however, with SMD implementation,<sup>12</sup> which must be ISO-NE's priority, as ISO-NE itself has frequently stated.

2. Eligibility to set ECP. Under the current market rules, in certain circumstances internal resources, such as peaking units when they are dispatched to their LOLs, are ineligible to set the ECP. Current market rules also provide that dispatchable external transactions are eligible to set the floor price when they are scheduled (thus effectively setting a floor for the ECP for the entire hour). ISO-NE is proposing three new criteria which will enlarge the range of commitment-flexible resources (resources that are dispatchable on an hourly or more frequent basis), including peaking units and external transactions, that will be eligible to set the RTMP, and thus the ECP.<sup>13</sup>

---

<sup>11</sup>TransCanada notes that ISO-NE has stated that work associated with implementing these market reforms could cause a zero to two-month delay in implementing SMD (TransCanada protest at 5).

<sup>12</sup>For example, currently NEPOOL operates under a single settlement system that lacks day-ahead markets for energy and reserves. Under SMD, NEPOOL will convert to a multi-settlement system and implement locational marginal pricing.

<sup>13</sup>Those criteria are as follows: (1) when there are insufficient resources to satisfy energy plus total operating reserves, all flexible resources committed intraday and dispatched at LOL are eligible to set the RTMP; (2) on-line peaking units and external transactions that are needed to satisfy energy plus TMSR are eligible to set the RTMP; and (3) on-line peaking units and external transactions that cannot be replaced by less expensive on-line resources in five minutes are eligible to set the RTMP.

New England Suppliers, in their protest, argue in essence that ISO-NE's changes have not gone far enough: they request the Commission to require the elimination of these new eligibility criteria and simply permit all flexible resources to set the ECP. New England Suppliers assert that the proposed system of eligibility screens adds an additional and unnecessary level of complexity to the market rules. New England Suppliers further contend that if ISO-NE dispatches a peaking unit other than for congestion relief or voltage support, then by definition the system is at peak conditions, and that unit is necessary to provide incremental energy, and that external transactions should be treated similarly to peaking units.

We will deny New England Suppliers' protest. We find that ISO-NE has provided sufficient justification for its proposed changes to the calculation of ECP. The proposal will improve the efficiency of the pricing system in the energy market by expanding the set of resources eligible to set the ECP to include all flexible resources providing incremental energy. Thus, internal and external resources will be treated similarly for purposes of eligibility to set the ECP. We do not agree with New England Suppliers that, in this single settlement market, all peaking units dispatched other than for congestion relief or voltage control should be eligible to set the ECP. For example, a peaking unit dispatched to its LOL is generally not the marginal unit and in this event should not be eligible to set the ECP.<sup>14</sup> Also, when a resource is no longer economic, but must remain on-line to satisfy its minimum run-time or other bid parameters, it should not be eligible to set the ECP.

3. LOL. ISO-NE's proposed changes to its reserve markets and its requirement that units bid their physical LOL are interdependent. ISO-NE proposes to require resources to bid their physical LOL, with an allowance for economic efficiency and emission characteristics. The bidding of physical LOLs<sup>15</sup> will give the ISO greater operational flexibility in both the energy and reserve markets.

Calpine and NSTAR object to the physical LOL requirement, describing it as an administrative measure and not a market-driven solution. They suggest that payment of opportunity costs to resources dispatched as reserves would achieve the same results. Calpine finds that operation at physical LOL may impair the operation of combined-cycle resources and/or violate environmental requirements, with each resource unique vis-a-vis

---

<sup>14</sup>A unit may be dispatched at its LOL even before it is needed because of the length of time for start-up of the unit and the anticipation that this resource will be needed later in the day.

<sup>15</sup> Defined as the lowest level the unit can reliably operated at for sustained periods of time, modified, if supported, by environmental and or economic requirements.

environmental, permit, and economic considerations. Calpine states that the setting of the minimum operating limit, which ensures that a resource will generate at least a certain amount of energy, is a risk management tool of significant importance to generators.

We find that Calpine's objections lack sufficient weight to warrant our rejection of ISO-NE's proposed physical LOL requirement. Use of LOLs that are higher than physically necessary (often as high as the unit's High Operating Limit) in bids can be used to influence selection, or, more importantly, non-selection in certain ISO-NE markets.<sup>16</sup> Further, a unit's high LOL may distort energy markets through imposing artificial limitations on dispatch, as a higher-priced resource may be dispatched out-of-merit to meet load/reserve requirements, but that out-of-merit resource will then not be allowed to set the ECP. We also find that the proposed revisions provide sufficient latitude for the determination of physical LOLs that are consistent with environmental and economic limitations. The proposal provides for higher LOLs when supported by environmental restrictions or when there are significant economic penalties not adequately represented by the three part bidding. Adjustments to the default LOL for environmental or economic reasons are established by submission of facts to the ISO, who will then determine the appropriate adjustment to the LOL. With an appropriate physical LOL and three part bidding, a generator will be able to avoid significant financial penalties when bidding in this market.

4. Compensation for opportunity costs. Currently only spinning reserves (TMSR) are paid opportunity costs for supplying reserves rather than energy. ISO-NE proposes to extend opportunity cost payments to non-spinning reserves (TMNSR and TMOR). The clearing price for these suppliers would be based on availability bids plus opportunity costs.

NSTAR objects to the expansion of opportunity cost payments to reserve suppliers. According to NSTAR, this would simply increase costs, not reliability, and will not incent more positive generator behavior. NSTAR also argues that TMNSR and TMOR provide no physical product, and the units providing them incur no incremental cost, so that it is irrational to pay the difference between the bid price, which should be zero, and the ECP.

---

<sup>16</sup>A unit brought online should be indifferent to which market it is selected in, reserve or energy, and should be able to set the clearing price in both markets. This does not require prices in both markets be equal, because costs are not equal, but selection in either market entails costs. A unit that provides energy incurs fuel and other costs. However, a unit that is in merit to provide energy, but is instead selected to provide reserves, has a lost opportunity that may be fairly represented by the difference between the bid and the ECP.

We disagree. These reforms in opportunity costs payment, together with cascading of clearing prices in reserve markets, are designed to make resources indifferent as to which product they are ultimately selected to deliver. Since the NEPOOL market design does not provide for the payment of opportunity costs to potential suppliers of TMNSR and TMOR, suppliers may seek to avoid having their resources selected for TMNSR and TMOR by deliberately bidding high LOLs or self-scheduling units. ISO-NE therefore seeks to compensate for the opportunity costs incurred by reserve suppliers to avoid such manipulation.

5. Cap on availability bids and cascading reserve prices. ISO-NE proposes a cap on availability bids of \$2.52/MW for non-spinning reserves. ISO-NE based this bid limitation on that currently used by NYISO in its TMNSR reserve market. There are essentially no marginal costs associated with being selected to provide non-spinning reserves. Under normal load conditions, suppliers of non-spinning reserves bid very low, often down to \$0, in order to ensure selection if reserves are needed to provide energy. ISO-NE finds the cap necessary to mitigate the market power associated with being the "last man standing" (*i.e.*, the last available resource) when reserves are in short supply.

Further, ISO-NE observes that when reserves are very tight, price inversions can occur among classes of reserve suppliers, and this reform will assure that less valuable reserves will never be paid more, in any hour, than more valuable reserves (*i.e.*, spinning reserves will be paid the same as or more than non-spinning reserves, which will be paid the same as or more than thirty-minute reserves). ISO-NE states that this should lessen the incentive to overstate LOL values or manipulate bids to avoid being selected as spinning reserves.

NSTAR avers that cascading will result in higher power costs without a corresponding increase in reliability. We find that the cascading of reserve prices (with the attendant \$2.52 bid cap), together with the requirement of bidding physical LOL and expanded eligibility for opportunity costs payment in reserve markets, will result in a more liquid and thus a more efficient reserve market in ISO-NE. We also find that cascading of reserve prices serves to remove artificial distortions from the reserve market, thus establishing a more efficient market regime. We therefore reject NSTAR's objection to this proposal.

6. New Replacement Reserves product. ISO-NE is introducing formal recognition of Replacement Reserves as an essential element of the Operating Reserve markets. ISO-NE notes that when there is a shortage of reserves in any reserves category, a resource that relieves constraints in either market relieves constraints in both markets. Currently, to meet Northeast Power Coordinating Council (NPCC) Operational Reserve Criteria, ISO-NE relies on reserves that are not formally designated and receive no

compensation. When scheduled and/or dispatched, they are paid like all other reserve resources. ISO-NE proposes to make Replacement Reserves a new category which is a sub-component of the TMOR market, and to designate such resources. During reserve shortages, Replacement Reserves will be paid under the guidelines of the TMOR market.

NSTAR objects to this provision, stating that it will only add to power costs and does nothing to increase reliability. We find that there is potential for an increase in TMOR expense as a result of this proposal, but disagree with NSTAR's conclusion that there is no reliability increase. The Replacement Reserves product will enhance the level of reliability in New England, and therefore should be appropriately compensated. We support ISO-NE's revision to ensure adequate reserves.

7. SNETs. Currently ISO-NE does not accept SNETs if accepting those transactions will affect unit commitment. In order to facilitate improved trading with NYISO and other control areas, ISO-NE proposes to allow SNETs, providing that the sale will not raise the New England price to a level greater than the cost of an off-line unit and the SNET does not reduce Operating Reserves below the level required to supply Replacement Reserves. ISO-NE proposes to monitor SNETs to prevent attempts to exercise market power through export of resources (a form of physical withholding which could drive up clearing prices in New England).

Connecticut would prefer greater penalties for gaming related to SNETs, and further argues that the proposed language indicates an excessive level of tolerance for gaming before ISO-NE would act. We find the threshold for review of possible gaming to be reasonable, and the mitigation measure – limitation/suspension of the participant's ability to submit SNETs – appropriate to prevent gaming behavior. The Commission notes that ISO-NE correctly describes this type of gaming as physical withholding, and that ISO-NE also has proposed specific thresholds for size and market impact to trigger review of such transactions by ISO-NE's Market Monitoring and Mitigation Group. In the event that the threshold level proves to be inadequate to prevent gaming, ISO-NE may lower the threshold by making a filing with the Commission. Finally, the Commission applauds ISO-NE for continuing to address seams issues with neighboring system operators.

The Commission orders:

The filing is hereby accepted, effective May 1, 2002.

By the Commission. Commissioner Brownell concurred with a  
separate statement to be issued later.

( S E A L )

Docket Nos. ER02-1149-000 and 001

-14-

Linwood A. Watson, Jr.,  
Deputy Secretary.